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| UNCW |
| Project 13 |
| MIS 555 |
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**Stored Procedure : aglsGradeUpdate**

ALTER Procedure [dbo].[aglsGradeUpdate]

(

@Score real,

@Comments varchar(500),

@grAssignmentID int,

@grStudentID int,

@instID int,

@grsectionID int

)

AS

SET NOCOUNT OFF;

Declare @gradeExists int

set @gradeExists = (select grStudentID from tblGrades WHERE (grAssignmentID = @grAssignmentID)

AND (grStudentID = @grStudentID))

if not @gradeExists is null

BEGIN

UPDATE tblGrades SET DateGraded = getdate(), Score = @Score, instID = @instID,

Comments = @Comments WHERE (grAssignmentID = @grAssignmentID)

AND (grStudentID = @grStudentID)

END

ELSE

BEGIN

INSERT INTO tblGrades(Score, Comments, grsectionID,

grAssignmentID, grStudentID, instID) VALUES (@Score, @Comments,

@grsectionID, @grAssignmentID, @grStudentID, @instID)

END

**Analysis:**

In Original table, there are three columns for primary keys. So if we add index, it may increase maintenance. Also, every index will have to include those three columns. Our suggestion is, remodel the table to have only one auto-increment column for primary key. And then, implement non-cluster index on the 2 heavily used columns grAssignmentID, grStudentID.

**Original table:**

CREATE TABLE testtblgrades1   
  (   
     grassignmentid *INT*,   
     grstudentid    *INT*,   
     grsectionid    *INT*,   
     score          *REAL*,   
     dategraded     *DATETIME*,   
     comments       *VARCHAR*(500),   
     instid         *INT*,   
     PRIMARY KEY (grassignmentid, grstudentid, grsectionid)   
  );

**Proposed Table:**

CREATE TABLE testtblgrades2   
  (   
     id             *INT* IDENTITY(1, 1),   
     grassignmentid *INT*,   
     grstudentid    *INT*,   
     grsectionid    *INT*,   
     score          *REAL*,   
     dategraded     *DATETIME*,   
     comments       *VARCHAR*(500),   
     instid         *INT*,   
     PRIMARY KEY (id)   
  );

**Proposed Index:**

Create INDEX test

on testtblGrades2 (grAssignmentID, grStudentID);